• COLORADO RIVER •

AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Vol. VII. JULY 25, 1940 No. 7

ON THE INSIDE LOOKING OUT

A view taken from the inside of the north portal of the Hollywood Tunnel.

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AQUEDUCT NEWS
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

306 West Third St.
Los Angeles, California

Published monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. VII July 25, 1940 No. 7

Congress Revises Boulder Dam Power Rates

Revision of Boulder Dam power rates, as provided in legislation recently adopted by the Congress of the United States, will result in a tremendous saving to the Metropolitan Water District which will be passed on to the taxpayers in each of the thirteen cities which comprise the District.

The new legislation will effect a saving to the Water District of approximately $600,000 annually for the first three years and about $800,000 for the next four years. During the entire life of the contract with the Federal Government, the District will be saved a total of about $16,000,000.

Final adoption of the measure by both houses of Congress in the early part of July crowned with success a three-year battle carried forward by General Manager Weymouth, General Counsel Howard, and Chief Electrical Engineer Gaylord. In recognition of the accomplishment of these three District officials, the Board of Directors commended their work in the following statement:

"The Board of Directors of The Metropolitan Water District of Southern California desires to commend General Manager and Chief Engineer F. E. Weymouth, General Counsel James H. Howard, and Chief Electrical Engineer J. M. Gaylord for the notable public service they have rendered in bringing to the attention of Congress the compelling facts which account, in a large measure, for the adoption of the Boulder Dam power rate revision bill.

"It will be recalled that officials of the Department of the Interior first gave consideration to the proposal of revising Boulder Dam power rates some three years ago, when Mr. Weymouth submitted to the Government the basic principles which have been incorporated, to a large extent, in the legislation

(*Continued on page 3*)

This is a follow-up of the picture of the baby mucking machine which appeared in this space in the June issue of the NEWS, and proves that the little gadget really works. It's seen in action here in the Hollywood Tunnel's north heading.

– DIRECTORY –

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Franklin Thomas, Vice-Chairman
S. H. Finley, Secretary

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Beverly Hills....Arthur Taylor
Burbank....James L. Norwood
Compton....Warren W. Butler
Fullerton..Walter Humphreys
Glendale.....Herman Nelson
Long Beach....William M. Cook
Los Angeles....Perry H. Greer
Los Angeles.....Otto J. Emme
Los Angeles.....D. W. Pontius
Los Angeles.....
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Santa Ana.....S. H. Finley
Santa Monica.....
.....Arthur P. Creel
Torrance.....Charles T. Rippy
J. M. Luney, Controller
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GENERAL STAFF

General Manager and Chief Engineer....F. E. Weymouth
Asst. Chief Engineer.....
.....Julian Hinds
General Counsel .....
.....James H. Howard
Asst. General Counsel.....
.....Arthur A. Weber
Chief Elec. Engineer.....
.....J. M. Gaylord
Asst. to Gen. Mgr.....
.....Don J. Kinsey
Asst. Controller, G. D. Smith
Asst. Treasurer, C. G. Olson
Secy. to Gen. Mgr.....
.....Elisabeth von Hagen

DIVISION ENGINEERS

Distribution.....R. B. Diemer
Transmission....Robt. N. Allen
Maintenance.....W. J. Neale
Field. Supt. Pumping.....
.....T. T. Walsh

SUPERINTENDENTS
(Main Aqueduct Tunnels)

San Jacinto Tunnel, District Force Acct., B. C. Leadbetter, Gen. Supt.

Softening and Filtration Plant
Griffith Company. Weymouth Crowell Co., Project Manager, Olen Evans, Field Supt.

Waste Water Disposal Line
United Concrete Pipe Corporation.

Schedule 29P
American Concrete & Steel Pipe Co.

Schedule 30SC
J. F. Shea Co., Inc.

Hollywood Tunnel
J. F. Shea Co., Inc.

Schedule 31P
United Concrete Pipe Corp.

Schedules 32CI, 33CI
Artukovich Bros

Schedules 34P, 35P, 36P
American Concrete & Steel Pipe Co.

Schedule 37SC
Macco Construction Co.

The downstream portals of the four penstock tunnels through which water will flow to operate the generators in the Parker Dam power plant now under construction.

Boulder Dam Power Rates Revised

(*Continued from page 2*)

adopted by Congress. The bill passed by Congress follows closely the draft of proposed legislation prepared by General Counsel Howard. Many facts and figures upholding the equity of the new legislation were provided by Chief Electrical Engineer Gaylord."

The basic revision provided in the newly adopted legislation is that the cost of Boulder Dam and its power plant shall be repaid by the revenue from power sold on an amortization basis rather than on a competitive basis as provided in the original legislation. This will result in a reduction on the rate charged for "falling water" for firm power from 1.63 mills per kilowatt hour to approximately 1.1 mills per kilowatt hour.

As a principal item in making the rate revision possible, the new legislation provides that the Government will reduce the interest rate on its investment from 4 per cent to 3 per cent. Another factor contributing to the rate reduction was the deferment of the payment of a sum of $25,000,000 which the act provides shall be set aside for flood control. Under the new legislation the payment of money for this purpose will be deferred until after the cost of the dam has been repaid.

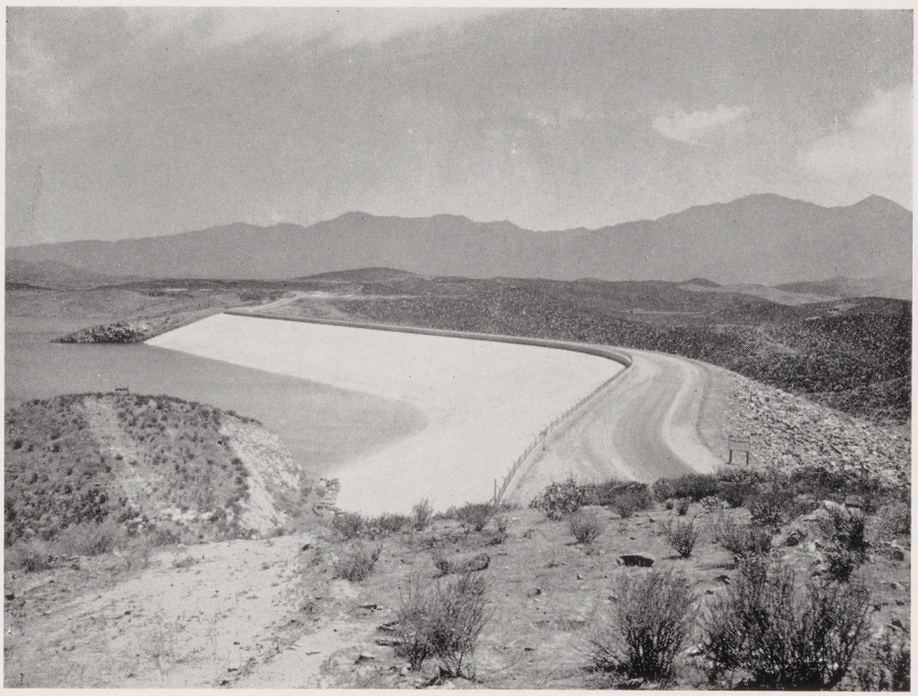
Power purchased by the District from Boulder Dam is used to operate the five pumping plants on the main aqueduct. Under its contract with the Federal Government, the District will eventually use 36 per cent of all firm power generated at the big dam.

Picture History Of Aqueduct To Be In Schools

In preparation for the coming school term, the Visual Education Department of the Los Angeles School System has prepared a very complete photographic history of the construction of the Colorado River Aqueduct. Compiled in cooperation with the District, this authentic pictorial record of the aqueduct will be distributed throughout the numerous grade schools in the city's system.

A total of 48 pictures is used in the collection, which is made up in three separate sets of 16 pictures per set, and there are 500 prints of each set. The pictures are printed on heavy cardboard, approximately 9-in. x 12-in., and on the back of each picture is printed a complete caption explaining the work shown in the picture.

Each of the three sets is assembled in a folder containing a colored map of the aqueduct, and each set is confined to a general phase of the aqueduct's history as indicated by the titles: "Preparing for Man's greatest aqueduct."; "Over and under towering mountains."; "Built to bring you a drink of water." All of the pictures used were reproduced from cuts which have been used in past issues of the Aqueduct News.



A recent picture of Mathews Dam showing the height to which Colorado River Aqueduct water has risen in the terminal reservoir. Lake Mathews now contains 60,000 acre feet of water.

MONTHLY REPORT REVIEWS ACTIVITIES ALONG THE AQUEDUCT LINE

(EDITOR'S NOTE: The following is a brief summary of some of the activities of the District as set forth in the monthly report of General Manager F. E. Weymouth, filed with the Board of Directors in July, covering work done in June.)

Miscellaneous Activities Division

During the month of June 137 labor applicants were cleared for work on the aqueduct. Of this number, 8 were made available for force account work and 129 were made available for aqueduct contractors. A total of 609 persons was interviewed during the month.

Main Aqueduct

San Jacinto Tunnel—The Lawrence hoist house was sold and removed. At West Portal the buildings were boarded up after removing the remaining equipment to the Banning yard.

Salvage Division — Stock appraised and transferred to the Banning salvage yard during June amounted to $10,136.91, making a total to date of $2,354,097.93. Sales during June amounted to $18,922.77 and transfers to other District features to $2,438.67. The total of salvage disbursements to date amounts to $1,404,221.98.

Parker Dam—Construction work on the power plant was continuous throughout the month. Under the Clyde Wood contract one penstock tunnel was holed through and less than 100 feet of tunnel driving will complete the other three penstock tunnels. The Bureau of Reclamation concrete plant is ready for operation. A fire on the morning of June 28 caused destruction of the large building used by the Bureau of Reclamation as a tool room, warehouse, and machine and carpenter shop.

Civil Engineering Division

Design—Specification drawings were completed for the Orange County Feeder. Designs for the connection of the upper feeder through Monrovia No. 2 tunnel to Morris Reservoir are nearing completion. Work was practically completed on 81 electrical design drawings covering the installation of electrical equipment in the water softening and fIltration plant.

Specifications—Five sets of specifications were issued in June including No. 335 covering the construction of the Orange County Feeder of the Distribution System. Bids were opened and awards made on five sets of specifications including No. 333 covering the remaining sections of the Burbank-Santa Monica Feeder of the Distribution System.

Hydrography—Assistance was given the U. S. Soil Conservation Service in a cooperative investigation of the Beaumont and San Jacinto basins. Storage in Boulder Canyon Reservoir reached its apparent maximum for this season at the end of June with 24,180,000 acre feet of water.

Distribution Division

Field and Office Engineering—Running and flagging of final location lines were in progress on the Santa Monica and Orange County feeders. Alignment, improvement, and substructure surveys were carried on for the extensions of the laterals to Compton, Long Beach, Torrance, and Burbank. A portion of Schedule 31P of the Burbank-Santa Monica line was relocated, at the crossing of Cahuenga Blvd. freeway, to permit early installation during the highway construction now in progress.

Contract Work—The Griffith Company worked continuously on various features of the water softening plant, completing the influent and effluent lines. The J. F. Shea Co. has completed both portal cuts of the Hollywood tunnel and made footage in both headings. On the La Verne-Whittier waste water line, United Concrete Pipe Corporation, the contractor, has begun fabrication of pipe in its Baldwin Park plant.

Electrical Engineering Division

Pumping Plants—The pumping plants were operated on a construction schedule during the month to supply water for testing and conditioning aqueduct structures. The 230-kv lightning arresters for all plants were delivered during the month, and at the end of the month the installation at Gene was 98 per cent complete.

Miscellaneous—Work was continued on studies of telephone line location between La Verne and Lake Mathews.

Purchasing Division

A total of 384 purchase orders was issued covering purchases amounting to approximately $60,000. Carload forwardings for the month included 6 cars of cement, two of general merchandise, and one of steel wire mesh.

Accounting and Costkeeping

The total cost of the work accomplished to June 30, 1940, was $184,382,906.21.

Laterals To Be Extended In Five Cities

Acting on the recommendation of General Manager Weymouth and of its Water Problems Committee, the Board of Directors recently authorized the General Manager to proceed with the construction of pipe lines extending laterals of the Distribution System so as to connect with the municipal water systems of the cities of Burbank, Compton, Torrance, Long Beach, and Santa Ana.

Shortly after the formation of the District and prior to the time that accurate estimates of distribution facilities could be made, the Board of Directors adopted as a general policy that the District would deliver water to a "convenient point at or near" the boundary of each city in the District.

In his recommendation to the Board, General Manager Weymouth pointed out that in carrying out this policy some difference in advantages to the cities have occurred. In the case of seven cities, the District's distribution lines pass through these cities en route to other areas and as a result connections to the local water systems of these seven cities can be made at nominal cost to the individual cities.

In the case of five cities, however, the geographic location of facilities furnished by the District is such that considerable additional facilities would have to be built by these cities in order to make possible the delivery of aqueduct water into their local water systems. These cities are listed above.

In order that aqueduct water might be initially available to all the present members of the District, and in order that all of the District cities might be treated on the same basis, the Board voted to extend the laterals within the city limits of the five cities affected, and plans for the necessary construction work are now being prepared.

CHECKING STATION ESTABLISHED ON M. W. D. PARKER DAM ROAD

In accordance with its recently adopted policy of applying certain precautionary measures and restrictions for the protection of main aqueduct pumping plants, the District has established a checking station on the road leading into the Parker Dam area at a point about a mile downstream from the dam. Deputy sheriffs are on duty at this station 24 hours a day and all persons entering and leaving the area are required to stop for inspection and registration.

M. W. D. Grows 21.5 Per Cent In Last Ten Years

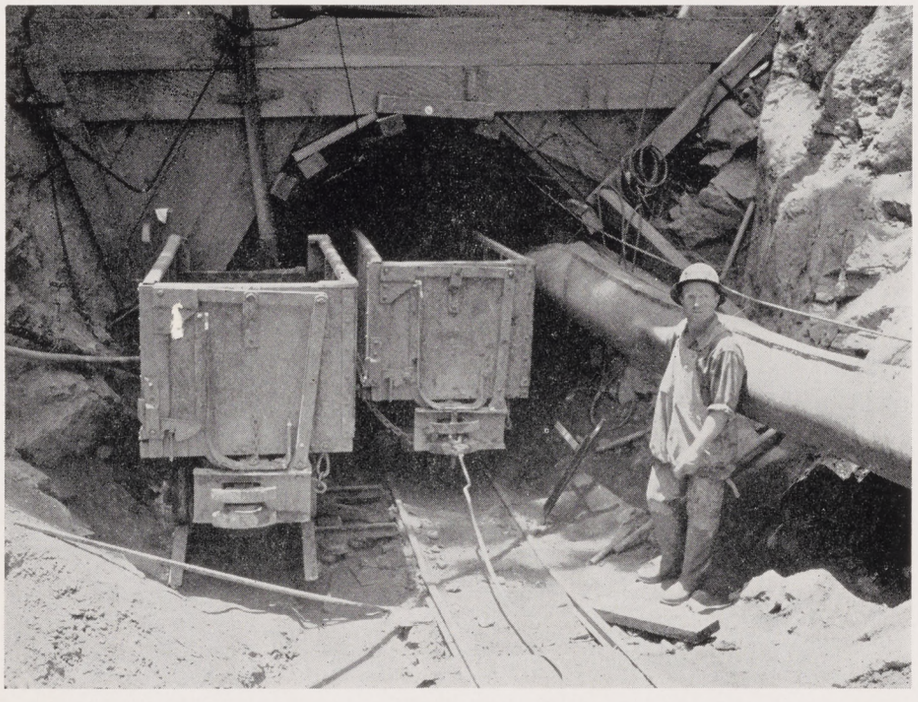
Although reporting census figures is apparently as dangerous as officially reporting feminine ages, the NEWS is listing below the preliminary results of the U. S. Census in the 13 M.W.D. cities as announced in various newspapers. Before the various Chambers of Commerce begin throwing things, the editorial department of the NEWS wants to go on record as only knowing what it reads in the papers and admits in advance that any or all of the figures listed may be subject to change after recounts have been made.

However, disregarding fractional amounts that may be altered, the Metropolitan Water District as a whole has shown a very healthy growth during the last decade, and a number of its members have recorded startling increases in population since 1930.

The population of the District as a whole has increased 21.6 per cent in the last ten years—from 1,665,833 in 1930 to 2,025,776 in 1940. The City of Los Angeles showed an increase of 20.9 per cent with its population increasing from 1,238,048 in 1930 to 1,496,792 in 1940. During this same period the other 12 cities of the M.W. D., taken as a whole, recorded a gain of 23.4 per cent.

The figures for the twelve cities other than Los Angeles are as follows: Anaheim, 10,979, no change; Beverly Hills, 26,346, increase 51%; Burbank, 34,090, increase 104%; Compton, 15,880, increase 27%; Fullerton, 10,901, no change; Glendale, 82,425, increase 30%; Long Beach, 163,441, increase 15%; Pasadena, 82,227, increase 7%; San Marino, 8,143, increase 118%; Santa Ana, 31,931, increase 6%; Santa Monica, 52,828, increase 42%; Torrance, 9,793, increase 35%.

All that was left of the Parker Dam power plant construction warehouse after it was destroyed by fire on the morning of June 28.



This novel method of passing cars is being used in the narrow confines of the Hollywood Tunnel. The car at the left is parked on a short section of track which can be rolled on and off of the main line.

Connection To Be Built To Morris Reservoir

As a means of connecting the Morris Reservoir in San Gabriel Canyon, which is to be a part of the Colorado River Aqueduct Distribution System, with the system's upper feeder, bids will be opened on July 31 for the construction of a connecting line between the reservoir and the north portal of Monrovia Tunnel No. 2.

The work is to be done under Specifications No. 338, and will consist of the construction of 630 feet of pipe line including 80-inch diameter enamel-lined steel pipe, together with appurtenant structures and the installation of operating valves.

Bids will also be opened on July 30, under Specifications No. 336, for furnishing and installing electrical equipment in the District's water softening and filtration plant at La Verne.

Military Leave Provided For M. W. D. Employees

Taking cognizance of the situation with regard to National Defense, and in accordance with the recommendation of the General Manager, the District's Board of Directors has added new provisions to the District's regulations relative to military leave for its employees.

In accordance with the Board's action the General Manager is authorized to grant leaves of absence without pay to District employees called into extended military training service or to active military duty; to fill the positions of such employees by temporary appointments; and, following the release of these employees from military service, to re-employ them in their former positions, provided such positions at that time exist.

The General Manager is further authorized to grant leaves of absence with pay for periods up to 30 days in any one calendar year to Reserve Officers or members of the Enlisted Reserve or members of the National Guard who are called for periods of military training as distinguished from extended active military duty. Should such employees be called for periods of training extending beyond the time of 30 days in any one calendar year, the General Manager and Chief Engineer is authorized to grant leaves of absence without pay in accordance with the conditions set out in the paragraph above for periods extending beyond that of 30 days in any one calendar year.

To make it official, all signs around the terminal reservoir of the aqueduct now carry the inscription "Lake Mathews."

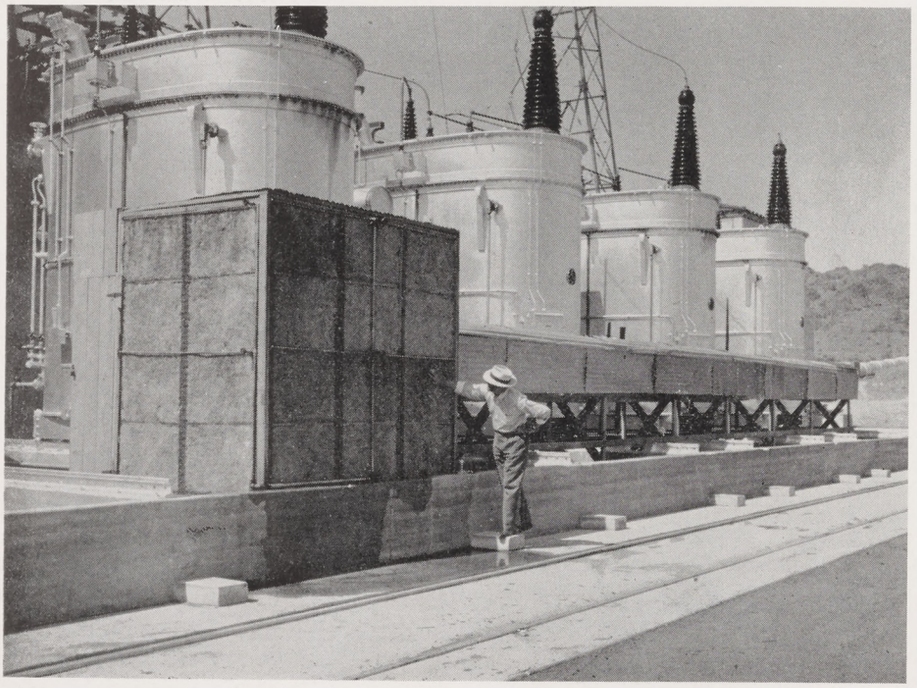
A number of District employees hold commissions in the Officers Reserve Corps of the Army, and at least one employee holds a commission as a Naval Reserve Officer.

DESERT COOLER BUILT TO CHILL HOT TRANSFORMERS

Taking a tip from the old-time desert rats who developed methods of cooling desert air long before more sophisticated mechanical means of air conditioning were introduced, District employees at Gene Pumping Plant have installed a desert cooler around the booster transformers through which electric power is sent to Phoenix from the end of the M.W.D. transmission line.

Because of technical reasons, the small transformers for the Phoenix line are installed in between the big aqueduct transformers. Being air cooled, and heavily loaded, the small transformers tended to overheat, and the desert cooler shown in the picture at the left of this column was devised to lower the temperature. The District's big transformers are water cooled and having been designed for their particular operating conditions they require no additional cooling.

The desert cooler operates by allowing water to drop down over excelsior and then directing an electric fan's air current through the moistened excelsior. By actual test the cooler reduced the temperature about 18 degrees around the transformers.



Desert cooler built at the Gene Pumping Plant to lower temperature around the small transformers of the Gene-Phoenix transmission line. The small transformers themselves are hidden in between the larger aqueduct units.

NEWS FROM FIELD AND OFFICE

Adding to our "Having Fine Time—Wish You Were Here" Department is a note from James Wise, formerly of the Banning Headquarters gang. After leaving the M.W.D. in June, 1939, Wise went with the Department of Water and Power of the City of Los Angeles. On July 15, 1940, he accepted a position with the Corps of Engineers of the War Department and sailed from San Francisco on July 19 for Anchorage, Alaska, where he will be employed on War Department construction. That makes three ex-aqueduckers that we have heard from who now make the far north their home. Any others?

* * * *

Word comes in that Nancy Featherstone, who was well known to many old timers on the job—she worked in both the Personnel and the Stenographic departments—is now giving lessons in the international language, Esperanto. In case some of her friends have lost her address, she is now living at 920 North Kings Road, Hollywood.

* * * *

Not because anybody was particularly interested, but because the rules said it had to be done, the Employees Association held an election on June 28, at which the following were elected to the Employees Board of Control of the L. A. Office; Edith Mallery, to represent Accounting, Controller, Treasury, Right-of-Way; Charles Van de Water, to represent Design, Distribution, Electrical-Mechanical; Alan Patten to represent Chief Engineer, Legal, Executive, Purchasing; Lynn Smith to represent Misc. Activities, Garage, Employment Office, and Examining Physician. Those remaining in office are Gene Reynolds, Everette LeGette, and Doug Fagg. Following the general election of representatives, the new Board of Control elected the following officers: President, Charles Van de Water; Secretary-Treasurer, Edith Mallery.

With all this safely out of the way for another year, the Editor of the Field and Office page of the NEWS set up the pictures shown on this page, and when Van de Water saw the proofs, he promptly resigned—not only from the job as President of the Employees Association but from the District as well. On July 29 he is accepting a position with the Vultee Aircraft Company in Downey. Anybody else want to be President?

* * * *

Old-timers who worked out of the Upland office of the Distribution Division during the construction of the Upper Feeder will be interested to know that the building is once more being used as a construction headquarters. This time the occupant is the Stone and Webster Engineering Company who are reported to be building a transmission line for the Southern California Edison Company from Boulder Dam to Chino.

* * * *

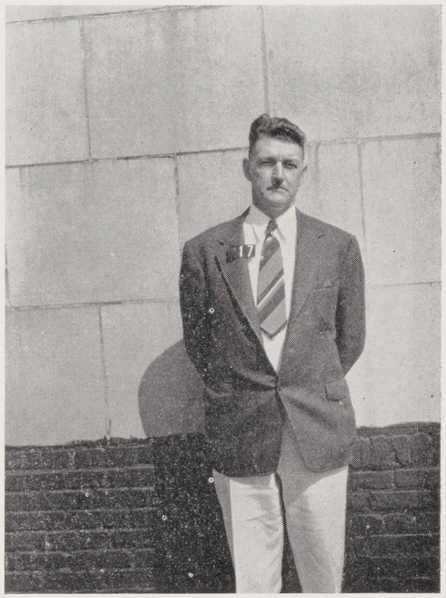
The Banning Chamber of Commerce is reported to be considering tentative plans for an Aqueduct Builders reunion to be held in Banning on Labor Day of this year. Banning was home to a number of thousand aqueduct builders during the construction of the San Jacinto Tunnel and other work on Divisions 5 and 6.

Aqueduct Temperatures
June 16 to July 15, 1940

	Max.	Min.
Gene Pumping Plant	117°	75°
Iron Mt. Pumping Plant	117°	74°
Eagle Mt. Pumping Plant	115°	70°
Banning	103°	48°
Lake Mathews	101°	50°

Placing this young lady's picture on the same page with that of the two muggs below, of course only leads to one title, "Beauty and the Beasts." She is Eileen Gamble, who recently resigned from the District to devote all of her time to running her home. Eileen had been with the District since November, 1930, and had been secretary to the Purchasing Agent all that time. No, boys, it's no use asking for her address because it's Mrs. Gamble.

Now here, ladies and gentlemen, is a horrible example of an engineer who wanted to be a politician. No. 141, alias "The Fixer," true name Charles Franklin Van de Water, newly elected President of the Employees Association. He was "mugged" and coded in connection with M.W.D. identification cards, and not for his alleged criminal record.



And this is how young Van on the opposite side of the page may look as a result of his desire to become president. This is No. 17, alias "Fagan," true name Douglas K. Fagg, Ex-President of the Employees Association. He used to be a smiling boy—onc't—but if you think he looks sour here, you oughta see the profile view in the muggs' gallery.

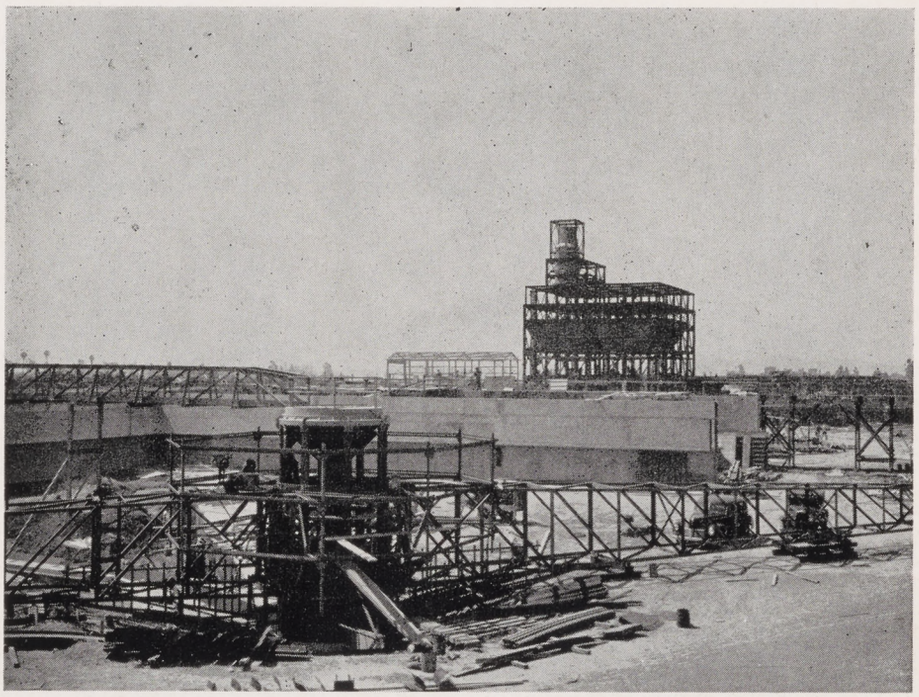
Contracts Awarded For Distribution Feeder Lines

Heralding the completion of the initial development of the Colorado River Aqueduct system, the Board of Directors of the Metropolitan Water District on June 28 and July 12 awarded contracts totaling $2,949,866.60, and covering the construction of approximately 44 miles of distribution pipe lines.

Completion of these contracts sometime in the early part of 1941 will complete the building of the initial development of the aqueduct and will bring to a close one of the greatest construction jobs in the history of the West.

On June 28 the District's Board of Directors awarded contracts for the construction of the remaining sections of the feeder extending from the San Rafael tunnels on the upper feeder to the City of Santa Monica and designed to serve Glendale, Burbank, Beverly Hills and Santa Monica.

This work is split into three schedules. Schedule 31P, extending from Burbank to the north portal of the Hollywood tunnel, was awarded to the United Concrete Pipe Corp. at its bid price of $514,939.53. The schedule is 5.8 miles long and will be constructed of lock-joint steel cylinder reinforced precast concrete pipe. This schedule crosses the new Cahuenga freeway now under construction, and in order to lay the aqueduct pipe line before the highway construction is completed, the District entered into a separate contract with Radich and Brown, the highway contractors, for placing 790 lineal feet of the pipe across Cahuenga freeway at a cost of $9.60 per lineal foot.



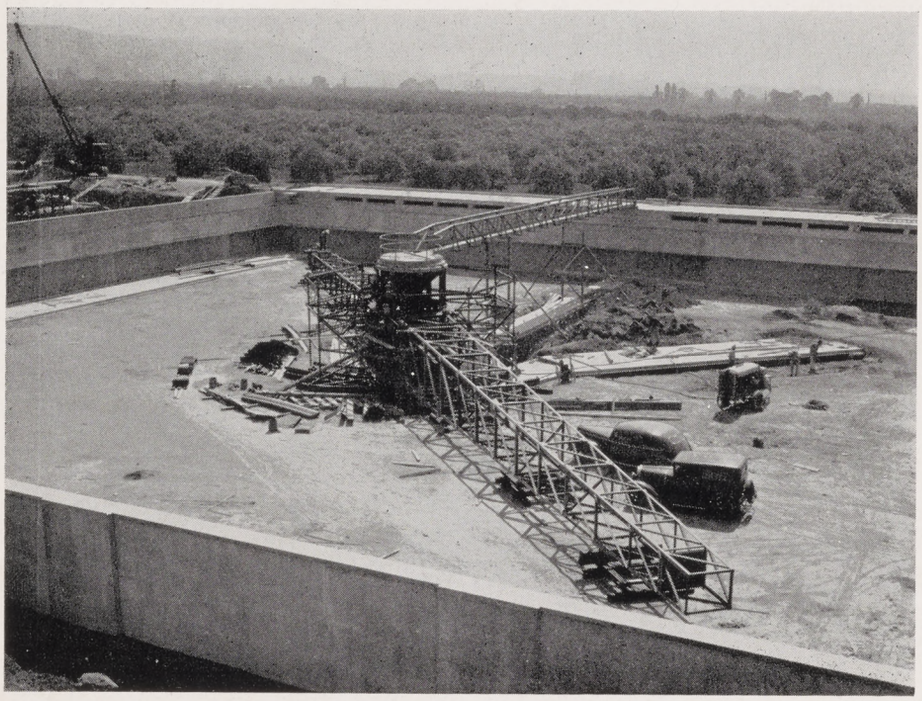
A general view of construction work now in progress on the District's water softening and filtration plant.

Contracts were also awarded on the same day for the building of the feeder south and west of the Hollywood tunnel. This work is divided into two schedules, totaling 10.2 miles in length. Both schedules (32CI and 33CI) were awarded to Artukovich Bros., of Hynes, Calif., at that contractor's bids of $394,475.25 and $366,332.07, respectively, for the two schedules. The pipe line will be of cast iron construction with a spun mortar lining.

Carrying Colorado River Aqueduct construction work into Orange County, the Board of Directors on July 12 awarded contracts for the construction of the Orange County Feeder which will carry aqueduct water from the water softening plant at La Verne to the City of Santa Ana via Fullerton and Anaheim. This line has a total length of 27.7 miles.

Schedules 34P, 6.3 miles, 35P, 8.8 miles, and 36P, 3.8 miles, were awarded to the American Concrete and Steel Pipe Company at that contractor's bid price on the schedules of $337,230.95, $458,051.60, and $202,117.20 respectively. The schedules will be constructed of lock-joint reinforced precast concrete pipe.

Schedule 37SC, 8.8 miles of welded steel pipe with gunite coating and spun mortar lining, was awarded to Macco Construction Co. of Clearwater, at its bid price of $676,720.00.



Looking down on the north settling basin at the softening and filtration plant showing work in progress on the assembling of the big clarifier in the basin. The settling basins are 200 feet square.